UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,868	01/12/2001	Jonathan C. Salas	MOON-P004	2417

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EXAMINER
BANANKHAH, MAJID A

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/759,868	SALAS ET AL.
	Examiner	Art Unit
	Majid A. Banankhah	2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-17 and 24-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-17 and 24-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.This final office action is in response to communication filed on March 16 2005. Applicants electing Applicant's arguments have been fully considered, but they are moot in view of the new ground of rejection. Claims 1-2, 5-17, and 24-29 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Logston et al. (US Pat.

No. 6,687,735, hereinafter Logston) in view of Armentrout et al. (US Pat. No. 6,463,457,

hereinafter Armentrout), further in view of McCanne et al (US Pat. No. 6,415,323, hereinafter

McCanne).

Per claims 1, and 15, the reference of Logston teaches of allocation of a distributed application among a plurality of servers, wherein a client is coupled to a number of servers (see Logston, Abstract, Fig.2, col. 3, lines 14-31). A client coupled to the plurality of servers to request a computing task (col. 3, lns. 62- to col. 3, ln. 9); a first server to allocate the computing task to a second server that executes the allocated computing task (col. 3, lns. 58-61, moving the server portion to a second server within the network).
While the reference of Logston teaches of allocating the distributed application to server based on a measured parameter associated with a the access of the server portion (col. 4, ln. 55 to col. 5, ln. 7), he fails to explicitly teaches that the allocation of the computing task to the second server is performed by matching an attribute of the second server with an attribute of the computing task.
Armentrout et al. in the same field of endeavor teaches of a distributed system wherein the allocation of the load of the server to another processor is based on matching the attributes of the another processor or server (Armentrout, col. 2, lns. 38-60, and col. 3, lns. 1-25), for the reason to minimize he idle computation among the servers and use the maximum efficiency of the computational power. It would have been obvious for a person ordinary skill in the art at the time the invention was made to use the matching attribute method of Armentrout with the load distribution method of Logston in order to use the maximum efficiency of the computers and

their resources by reducing the idle time and not assigning a high capacity sever to a low demand
client request (See Armentrout, col. 4, lns. 9-16).

Regarding the amended limitation of "server sets", and "redirecting the request to another server
set", the modified reference of Logston does not clearly teach of a "first and second distributor
server set" and "redirecting the task to a second distributor server set". The reference of
McCanne, in the same field of endeavor, teach of load balancing in a distributed environment
wherein the servers are grouped into clusters and the client request is redirected to a cluster based
on the address field of the packet (McCanne, col. 3, lines 55-68), for the reason to avoid
multicast and increase efficiency and reduce traffic, Therefore, it would have been obvious for a
person ordinary skill in the art at the time the invention was made to use the matching attribute
method of Armentrout with the request redirection method of McCanne in order to use the
maximum efficiency of the computers and their resources by reducing the idle time and not
assigning a high capacity sever to a low demand client request (See McCanne, col. 4, lns. 59, to
col. 5, line 15).

Regarding the dynamic allocation the server portion of distributed applications among multiple
server machines, in Logston, it is well known that an application is a computer program that is
broken into different component such as task. The method of Logston is applicable to task much
the same way as it is applicable to application components and does not reduces its capability by
using task because application has the same properties as task.

Per claims 2-3, in the system of Logston the second server and the first server comprises a
plurality of fulfillment Severs (McCanne, col. 4, ln. 59 to col. 5, line 15).

Per claim 4, another server allocates the request to the first server. The allocation is dynamic and
any server can allocates to any other server after the first initial allocation and this is what
exactly Logston teaches (col. 1, ln. 66 to col. 2, ln. 23).

Per claim 5, the attribute of the second server is load capacity. Armentrout teaches of load
capacity in col. 4, ln. 66 to col. 5, ln. 14.

Per claim 6, the attribute of the second server is type of application residing on the server.
Logston teaches of optimal server load balancing (col. 8, lns 63 to col. 9, ln. 7) and matching
application type with the server is a way of optimally operating the system performance, for the
reason that it saves time.

Per claims 7-8, the attribute of the second server is idle computing power. Armentrout teaches of
computing power in col. 3, ln. 48-55 (idle computational power). Also he teaches of server
computational power in col. 4, ln. 66 to col. 5, ln. 14.

Per claim 9, the attribute of the second server is matched to an attribute of the client. Armentrout
teaches of the limitation in col. 3, lns. 1-25.

Per claim 10, the attribute of the second server is matched to an attribute of a user. The reference of Armentrout teaches of the attributes of the user in col. 2, lns. 24-29. Additionally, the system of Armentrout is based on the client demand.

Per claim 11, a database contained in the first server that stores the attributes of the second server (see, Armentrout, database server, col. 18, ln. 62 to col. 19, ln.6).

Per claim 12, the database is dynamically upgraded with a current attribute of the second server (Logston, col. 13, lns 51-54, updating statistical database in server farm).

Per claim 13, a database storing user attributes (Armentrout, col. 18, ln. 62 to col. 19, ln. 6).

Per claim 14, a database computing task attributes. Please see the rejection of claims 11-13.

Per claim 16, please see the rejection of claims 5, 8 and 9.

Per claim 17, please see the rejection of claim 12 above.

Per claim 24, managing a set of serve including: creating a record of the attributes of a second set of servers in a database contained in a first set of server; and updating said record in the database, wherein the second set of servers communicates its attributes to the first set of server. Armentrout teaches of a database server wherein the second set of servers can communicates their attributes with the first servers (see, Armentrout, database server, col. 18, ln. 62 to col. 19, ln.6, and McCanne, col. 9, lines 28-47).

Per claim 25, the dynamic scheduling system of Armentrout teaches of this limitation in col. 18, lns. 47-61.

Per claim 26, the transfer of attributes is scheduled by a triggering event (Armentrout, col. 18, lns. 47-61).

Per claim 27, the transfer of attributes is scheduled periodically (Armentrout, col. 12, lns. 15-20, and col. 21, lns. 33-45).

Per claim 28, the step of registering a server from the second set of servers with a server from the first set of server, wherein the transfer of attributes is from the registered second server to the corresponding first server. It is well known that any time there is an association of a server with another server for communication and information forwarding, the addresses of the two should be registered. Since there is a transfer of attributes between the two in the Armentrout (Armentrout, col. 12, lns. 15-20, and col. 21, lns. 33-45), there exist a registering of the servers as well.

Per claim 29, transfer of attributes is broadcasted to all the servers of the first set (see the communication in the server farm in Logston, col. 3, lns. 13-31).

4. Applicant on page 7 of his remarks argues in substance that, "All of the independent claims (i.e., claims 1 and 15) are amended to require a first distributor server set and a second distributor sever set coupled to the first distributor server set, the second distributor server set including a first server. Logston and/or Armentrout do not describe or teach a first distributor sewer set and a second distributor server set coupled to the first distributor server set."
Later on the same page arguing that: "Moreover, both of the independent claims are amended to require that the first distributor server set redirects the computing task to the first server of the second distributor server set and that the first server allocates the computing task to the second server that executes the allocated computing task. Logston and/or Armentrout do not describe or teach that a first distributor server set redirects the computing task to the first server of the second distributor server set and that the first server allocates the computing task to the second server that executes the allocated computing task".
In response applicants attention is respectfully directed to the new reference of McCanne, where he teaches of "server clusters", and "redirecting a request" to another server in another cluster in col. 3, lines 55-68, col. 4, line 59 to col. 5, lines 15, and col. 9, lines 28-47.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

6. Applicants amendment necessitated the new ground of rejection. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).
        A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE The application has been amended as follows:

ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR
RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS
FINAL

7.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to **Majid A. Banankhah** whose telephone number is (571) **272-3770**. The examiner can normally be reached on Monday – Thursday, 8:00 AM – 4:00 PM.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Meng-Ai An can be reached on (571) 272-3756.

    Information regarding the status of an application may be obtained from the patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Maid Banankhah

                                                        MAJID BANANKHAH
6/13/05   PRIMARY EXAMINER